



Simply improving your position.SM



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It takes a system:
Superior. Seamless. Scalable.

FIELD COMPUTERS	GUIDANCE AND STEERING	APPLICATION CONTROLS	BOOM CONTROLS	PLANTER CONTROLS
Viper Pro	Cruizer	SCS Consoles	AutoBoom	AccuRow
Envizio Pro	SmarTrax™	RFM Flow Meters	AccuBoom	CropStart II
	QuickTrax	Valve Products	SmartBoom	
	FarmPRO™	AccuFlow		
	GPS Receivers	Sidekick: Direct Injection		
	RGL Series Lightbars	Switch Pro		
		FlowMax		
		DCS Consoles		



Envizio Pro: The next step up.

If you want a guidance system with even more capability than Cruizer, consider the Raven Envizio Pro field computer. Envizio Pro offers options for boom section control, boom height control, dual product control and variable rate control. An even larger 6.4" color touch screen and other features make Envizio Pro the next logical step up for growers who want to bring even more Raven technology into their operations.

Raven: Simply improving your position.SM

Adding Raven to your operation brings an unequalled brand of precision agriculture innovation and performance to your farm.

Imaginative products that are relevant and reliable. A thoughtful approach to solving problems unique to agriculture. Seamlessly integrated systems that simply work — simply.

An incredible depth of human resources: On-the-ground service from Raven Precision Ag Specialists; our customer-oriented product development and support staff; and your local Raven dealer or distributor.

Raven offers a powerful and profitable product portfolio — targeted precisely on what matters most: Reducing input costs. Increasing yields. Saving time and labor. Making better decisions. Enhancing environmental stewardship. Achieving your financial objectives.

It's all about improving your position. Pinpointing exactly where you are in your field. Applying best management practices to grow more with less. Helping you meet challenge, cope with change and capitalize on opportunity. Strengthening your balance sheet.

If you want to farm better, smarter and more profitably, discover Raven. Because improving your position is our highest priority.

Cruizer™



Guidance made simple and affordable.

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1-800-243-5435
RavenPrecision.com

Raven Industries-Canada
1-800-793-2155
RavenCanada.com



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Cruizer™



If you've been waiting to add guidance to your operation, your wait is over.

With Raven Cruizer, you can add the benefits of an easy-to-use precision guidance system to your farm without having your budget go off-course. Because we've removed two of the biggest obstacles—complexity and high cost.

Cruizer is simple in every way. Simple to install. Simple to operate. Simple to understand. And since Cruizer is surprisingly affordable, you enjoy a quick payback through improved efficiency and input usage. Fast and easy installation and simple operation mean you can get set up and get in and out of the field more quickly.

Rising input and labor costs require you to manage your operation even better. With Cruizer, you can avoid expensive overlaps that waste time, money and product. You can avoid skips that reduce effectiveness and profitability. You can see where you're going, where you've been and how many acres you've covered—right there on the bright display screen. You can view your field from a variety of perspectives right from your cab—and you can even change patterns on the fly.

Increase your flexibility. Cruizer brings greater accuracy and efficiency to a variety of operations—from tillage to seeding to spraying to harvesting. You can easily move Cruizer from tractor to tractor—even tractor to truck. Cruizer is also a great “second” guidance unit for equipment and applications that don't require upper-end capability or investment.

Less stress. Less fatigue. Cruizer's easy to read guidance display means you have one less thing to worry about while you're working. Instead of keeping track of where you are in the field, you can concentrate on other important activities and information. You can make life even less stressful with an upgrade to Raven assisted steering.

Guiding you toward profitability. Cruizer benefits go straight to your bottom line—especially when you consider Cruizer's competitive price and quick payback on your investment. With Cruizer in your cab, you can know more, control more—and make more.

Cruizer offers sophisticated guidance technology in one affordable, easy to use unit.

Large 5.7" full-color high-resolution touch screen display features easy-to-understand icon-based menus and status indicators for simple operation. Day/night mode ensures great visibility at any hour of the day.

Integrated lightbar system for additional visibility, guidance and reassurance.

Easy installation allows you to get your Cruizer on the job in just minutes. Cruizer comes with a RAM® mount bracket. A cigarette lighter adapter serves as the in-cab power source. Stick the antenna on the top of the cab and you're ready to go.

Built-in 10 Hz DGPS receiver provides swath guidance and coverage area information using accurate sub-meter guidance of 9" pass to pass. Cruizer comes with an external DGPS antenna. *NOTE: Some regions may require an upgrade to a MBA-3 helix antenna for optimum performance. Check with your Raven dealer.*

Enhanced “Last Pass” Guidance is the industry's easiest to operate contour guidance technology—perfect for irregularly shaped fields. Our newest version includes automatic correction intelligence to virtually eliminate the possibility of repeating an error made on one pass.

Record keeping made simple with the use of a thumb drive. With **bitmap** files, you can quickly save and print reports showing your coverage map, acreage covered, etc. The **SHP (Shapefile)** files

are geo-referenced and can be imported into most standard mapping software. And with **KML** files, you can import your coverage information into Google™ Maps or Google™ Earth, using their free software to overlay your coverage map on satellite images of your fields—the ultimate in cool.

Choice of patterns allows you to easily switch between A-to-B, Last Pass and Pivot patterns. You can also switch between A-to-B and Last Pass on the same job.

See what you need to see with your choice of bird's eye view or downfield 3-D perspective. Field review screen helps verify coverage and identifies skips. Cruizer also calculates acreage within a defined boundary, so you can know just how much ground you covered.

Simple upgrades allow you to add Raven assisted steering (SmarTrax™) or Raven tilt sensor for even more capability, simplicity and efficiency.

Free software updates are available online. You can also sign up for e-alerts and we'll notify you when a Cruizer update has been posted on our Web site.

Cruizer Care is an optional service plan that extends your warranty, gives you priority status when you call our service center, and ensures free next day shipment of a replacement Cruizer if needed. Talk with your Raven dealer for more information. *NOTE: Cruizer Care is only available in the U.S. and Canada.*



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Envizio Pro

Envizio Pro: High Value Features and Benefits

Multi-functional design links the other parts of your precision ag system together with a single in-cab console. The sturdy, RAM-mounted console gives you complete system control with the touch of a finger—and helps reduce cab clutter at the same time.

Brilliant 6.5" touch-screen display lets you see where you've been, where you're going and where you are at that moment. Enhanced navigation with bold, easy-to-use icons simplifies operation—and a special day/night mode offers clear viewing even in dark- and low-light conditions.

Integrated DGPS sub-meter receiver is standard equipment for convenient all-in-one tracking with 9" pass-to-pass accuracy using WAAS and EGNOS satellite signals. Also available with an MBA-3 helix antenna for more precise GPS tracking when satellites are low on the horizon. e-Dif correction is optional for differential satellite signals.

Enhanced "Last Pass" guidance is the industry's easiest to operate contour guidance technology—perfect for irregularly shaped fields. Our newest version includes automatic correction intelligence to virtually eliminate the possibility of repeating an error made on one pass.

3-D moving-map guidance display helps keep you on line in any pattern—straight, fixed curve, pivot and enhanced Last Pass. The high-resolution landscape screen makes your progress easy to see and with the day/night mode, you can drive all night and stay on course 24 hours a day.

Multiple screen views let you switch on the fly between downfield and bird's-eye views to fit your operating needs at the time. Ideal for checking field coverage and skips one minute—and navigating the next.

Field review screen allows you to check field coverage on the spot—and correct any skips or missed areas before leaving the field. Another one of the many on-screen features that help you do more with less.

Four field patterns to choose from means easier line acquisition and faster, more accurate field coverage. Patterns include straight A-B, fixed curve and pivot, plus Raven's exclusive enhanced Last Pass feature for irregularly shaped fields.

Real-time data mapping, field reports and record keeping give you the tools and information you need to improve your bottom line by saving time, reducing input costs and improving overall performance from one season to the next.

Two USB ports allow you to transfer field data easily—like coverage records and application rates—from your field to the office with a simple thumb drive for better farm management and analysis.

BMP and SHP file formats greatly enhance your ability to record, analyze and make the best use of field data—from simple coverage data to geo-referenced shape files for higher level analysis.

Industry compatible technology allows you to share, collect and print data from commonly used industry software and equipment without problems. With Raven, you don't have to worry about proprietary or compatibility issues keeping you from doing what you need to do.

Dual-product control gives you an extra dimension for efficient liquid, granular, NH₃ and planter applications. That includes direct injection for even greater savings in time and money.

Optional single-product variable rate technology capitalizes on Envizio Pro's optional prescription map capability to help you get more out of your fields—and do it with less waste, fewer inputs and a smaller chemical footprint. Easy steps for importing and retrieving your prescription maps when you're ready for this upgrade. (Optional)

Wireless Internet capability is coming soon for convenient online communications. A great way to connect you to the Web, to your farm and to your field. (Optional)

It takes a system:
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	SmartSteer™	Valve Products	SmartBoom	CropStart II
	FarmPRO™	AccuFlow		
	GPS Receivers	Sidekick: Direct Injection		
	RGL Series Lightbars	Switch Pro		
		FlowMax		
		DCS Consoles		

Viper Pro: The next step up.

If your operating needs call for more system power and application control than Envizio Pro can comfortably provide, it's time to step up to the Viper Pro field computer. Viper Pro comes with a larger 10.4" vertical touch-screen display, more memory, faster processing and wireless Internet capability. Loaded with capability, Viper Pro is equipped to handle five different product applications at the same time, each with its own variable application rate for maximum savings and performance. GPS receiver sold separately.

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Complete system control for
greater savings and performance.

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Envizio Pro



The Envizio Pro multi-function field computer puts you in complete control of your precision ag system—and allows you to get more out of every phase of your farming

operation. It's easy to set up, easy to run—and even easier to expand when you're ready to add new, even more powerful system capabilities. From your first pass to your last, Envizio Pro is the perfect interface for tying your different system functions together—and rewarding you with greater efficiency, performance and savings.

Seamless operation. Envizio Pro is the driving force for your system functions. From integrated GPS technology, advanced data mapping and record keeping to dual-product control, boom management and assisted steering, Envizio Pro works seamlessly to deliver greater efficiency and performance.

Doing more with less. With the latest in advanced computer software and GPS technology, Envizio Pro brings a new level of accuracy and control to virtually every production area. And at the end of the day, it all adds up to greater savings in farm inputs with more efficiency and productivity.

Intelligently designed. Scalable. Envizio Pro is designed with the flexibility required to accommodate your farming needs today—and let you grow your system capabilities when conditions change and the time is right. That same customer focus is evident in Envizio Pro's compatibility with commonly used industry software and equipment.

Guiding you toward profitability. Envizio Pro benefits go straight to your bottom line—especially when you consider Envizio Pro's powerful time-saving and productivity-enhancing features. With Envizio Pro in your cab, you can know more, control more—and make more.

Powering your farming potential with ease and precision.

Improving your bottom line

Envizio Pro helps you see your farming operation in ways that make a world of difference when it comes to simplifying your job and improving your bottom line. It all starts with a 10Hz DGPS integrated receiver for sub-meter accuracy—and continues on with a brilliant 6.4" LCD touch-screen display that shows you precisely where you've been and where you're going—day or night.

With multiple viewing options and field patterns, Envizio Pro makes sure you cover everything that needs to be covered—no more, no less. Its colorful 3-D moving-map guidance display tracks your progress and makes sure you stay on course. And with the touch of a finger, you can change field patterns and have access to the coverage maps and records you need to eliminate skips and improve efficiency.

Application control the way you like it—simple, accurate and efficient

Envizio Pro's dual-product control delivers the kind of coverage it takes for most farming operations—at just the right rate and in just the right place. That saves you time and money by reducing chemical waste and making sure your fields get precisely what they need for maximum yields and profitability.

Envizio Pro also comes with optional single-product variable rate control when you're ready to scale up to prescription mapping for even greater input savings and performance. And it all works seamlessly with Raven's boom management systems with automatic section control and boom height adjustments.

Your link to greater system control, savings and profitability

There are some things in farming you can't control, and then there are those

things you can. Your "can do" list is getting longer all the time—thanks to Envizio Pro and the masterful way it integrates the industry's most advanced precision ag equipment. Like Raven's SmarTrax™ and SmartSteer™ assisted steering systems for precise, hands-free driving. And Raven's automatic boom controls, featuring AccuBoom automatic section control and AutoBoom for controlling boom height with faster, more even coverage on all types of terrain.

Record keeping and mapping made simple

With the use of a simple thumb drive, Envizio Pro gives you a leg up on record keeping and field mapping. With bitmap files, you can quickly save and print reports showing your coverage map, acreage covered and more. The SHP (Shapefile) files are geo-referenced and can be imported into most standard mapping software.



Envizio Pro's field coverage map lets you monitor progress and eliminate skips. The coverage map here overlays a prescription map used for variable rate applications (VRA). Single-product VRA is optional with Envizio Pro.

Scalable features give you plenty of room to grow

Situations change—and when they do, your Envizio Pro is ready to help with scalable features that allow you to tap into even greater system capabilities. Popular upgrades include variable rate mapping and e-Dif correction for differential satellite signals and non-stop accuracy.

With Raven's new Switch Pro you can also upgrade easily from one of our current spray control systems, like the SCS 440, to Envizio Pro without breaking a sweat. It's a simple move that pays off big by giving you more product control and system capability without having to change your current cabling/harness system.

World-class options for your precision ag system.

Envizio Pro is the "great enabler" when it comes to building a world-class precision-based system to help get you where you want to go. Raven's innovative system options work seamlessly with your Envizio Pro field computer to surpass your operating goals and expectations—simply.



SmarTrax™ The most accurate GPS-assisted hydraulic steering package in its class. Delivering hands-free steering at speeds up to 27 mph with faster line acquisition and more accurate spraying, spreading, seeding and tillage.

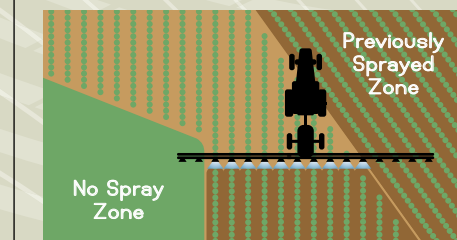


SmartSteer™ Assisted steering solution has a direct mechanical gear drive to eliminate slippage and delivers more accurate tracking from start to finish. The convenient collar mechanism clamps around the steering column without you having to remove the steering wheel.

AccuBoom Automatic boom section control with CANbus technology for extra chemical savings and environmental benefits. Allowing you to eliminate skips and avoid no spray zones and previously sprayed areas.



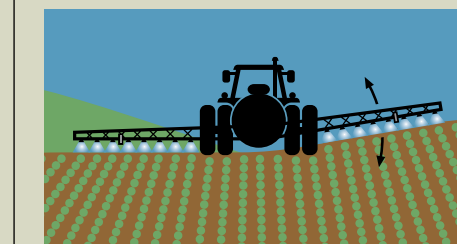
AccuBoom Automatic Section Control



AutoBoom The ultimate in automatic boom height control. Allowing you to spray more acres in less time—and with less effort. Ideally suited for booms of all sizes and for controlling larger booms easily. Innovative design also reduces wear and tear on valuable equipment. Three height control options available.



AutoBoom Automatic Height Control



Phoenix 300 Receiver Envizio Pro can be purchased without integrated GPS technology and upgraded with the Phoenix 300 dual-frequency receiver for decimeter accuracy. Easy to install and just as easy to move from one machine to the next for maximum flexibility and return on your investment. Helix-style antenna provides better tracking when satellites are low on the horizon.



Switch Pro Innovative design allows you to upgrade easily from Raven's SCS or non-mapping control systems to a multi-function field computer like Envizio Pro without having to install a new cable/harness system. Easy to use and even easier to set up with up to 10-section product control. Simply replace the current console with Switch Pro and you're good to go.

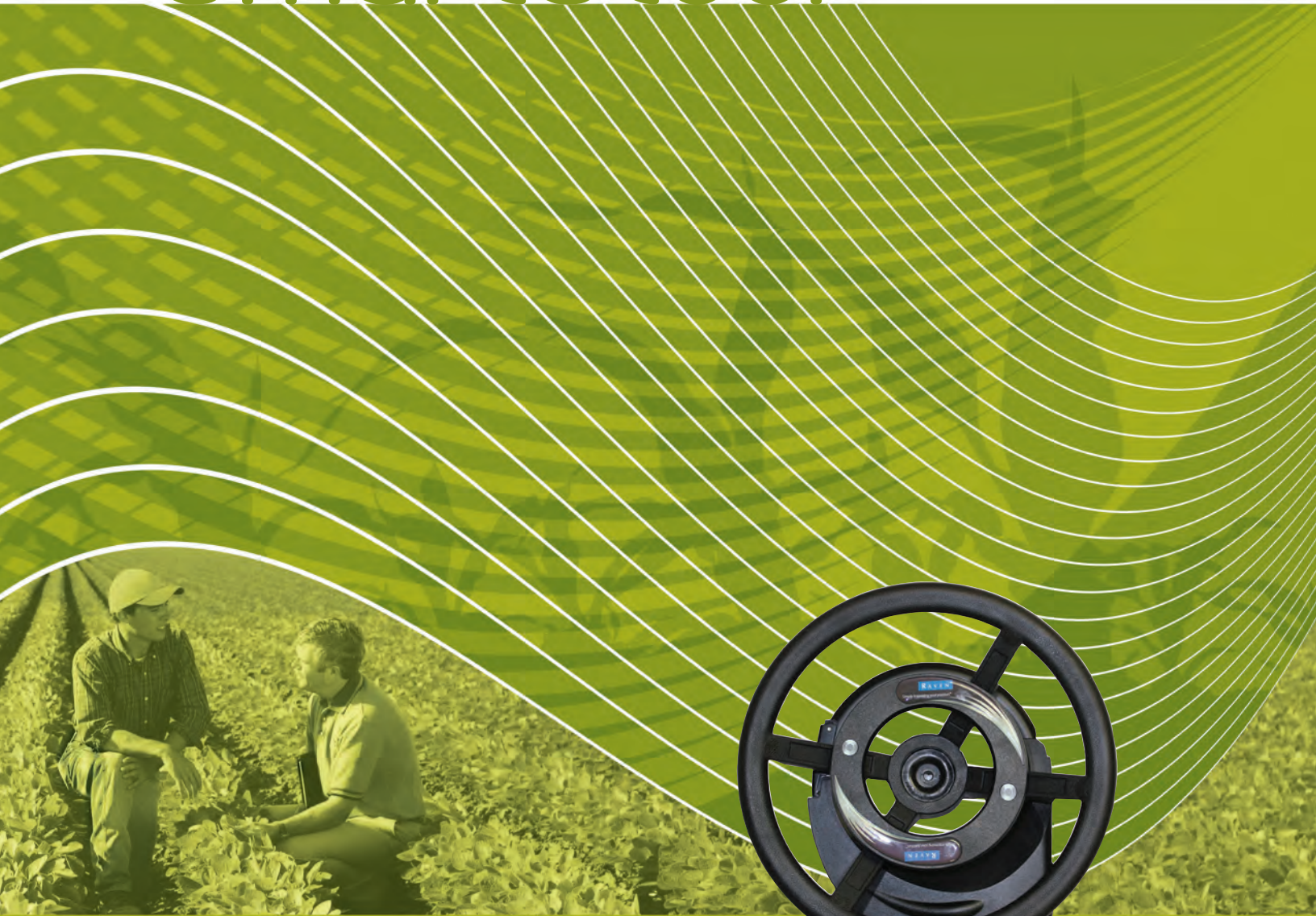
Your Raven brand distributor and Precision Ag Specialists have the training and experience to help you evaluate your needs and build the best precision ag system for your operation.



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SmartSteer™



Assisted steering made portable and affordable.

SmartSteer™



SmartSteer assisted steering takes the stress out of driving and helps you improve your operating efficiency and performance at the same time. This affordable, simple-to-install assisted steering system is intelligently designed to keep you on

line all day long with convenient hands-free driving—and that's a smart choice in any field.

Superior accuracy by design. SmartSteer's direct gear drive is vastly superior to the friction wheel designs found on other assisted steering systems, eliminating unwanted slippage and pinching for improved accuracy and reliability.

Simply more mobile. SmartSteer is intelligently designed so you can move its mechanical drive unit and advanced yaw sensor/control node quickly from one vehicle to the next with a simple transfer kit. You don't even have to take the steering wheel off—and the sensor/control node fits neatly out of the way in any cab.

Peace and quiet. Engineered for excellence, SmartSteer is one of the quietest assisted steering products on the market. No matter how many hours you spend behind the wheel, you'll appreciate the quiet sound of SmartSteer every time you drive.

Money in the bank. With automatic system calibration and best-in-class line acquisition, SmartSteer is like money in the bank—and that makes it a smart investment on any farm.

Driving advanced improve your

SmartSteer assisted steering is a smart choice when it comes to improving your bottom line. It's fast, affordable and simple to use.

Faster operating speeds get you in and out of the field in record time—and make it possible for you to relax as you cover more ground with faster, more efficient applications.

Direct mechanical gear drive eliminates slippage and delivers more accurate tracking from start to finish. SmartSteer's robust, high-torque motor also keeps you on line even as soil conditions change.

Compatible with Raven guidance systems and field computers for maximum flexibility and convenience. See details on back.



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Processes that simply bottom line—hands free.

Quick steering disengagement the moment you take the steering wheel. No buttons to push or switches to flip. Simply grab the wheel and you're in control.

Foot-pedal steering engagement is convenient and keeps your hands free for other operations.

Superior housing and gear design significantly reduce background noise for near-silent running, more streamlined operation—and a better in-cab environment all around.

Smart controller module allows you to program all steering functions and settings on your Raven Cruiser guidance system or your Envizio Pro and Viper Pro field computers.

Best-in-class line acquisition at any point past 90 degrees saves you more time at every turn. SmartSteer also has four field patterns to choose from for enhanced performance—straight A-B, fixed curve, pivot and enhanced last pass.

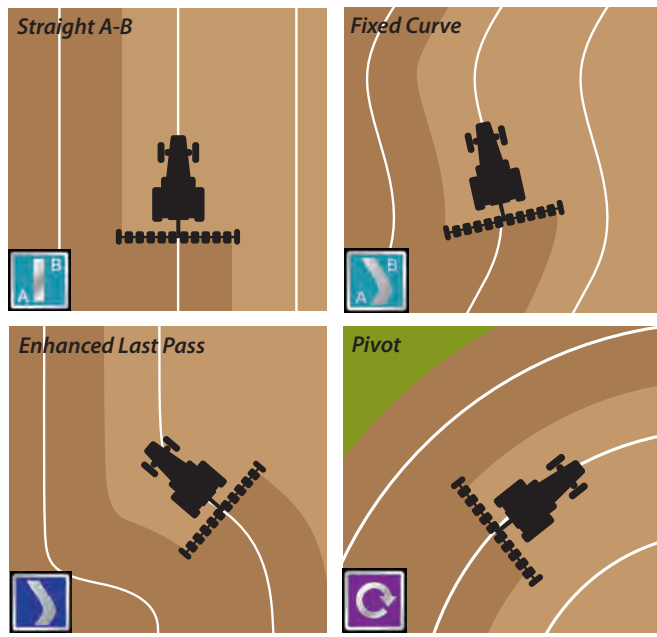
Automated system calibration simplifies startup and does all the figuring for you. No more headaches or tinkering—and with Raven's easy-to-follow Setup Wizard and automatic system calibration, you can be up and running in no time.

3-D terrain compensation automatically corrects for roll, pitch and yaw in rough terrain for uninterrupted accuracy and precision.



Convenient collar mechanism clamps around the steering column without your having to remove the steering wheel, making it simple to put on and simple to take off—a welcome feature when moving SmartSteer assisted steering from one vehicle to the next.

SmartSteer assisted steering gives you your choice of four field patterns for faster line acquisition, higher operating speeds and more relaxed, stress-free driving.



Field computer and guidance selections for SmartSteer™



Raven's highly portable Cruiser guidance system offers the ideal control interface for SmartSteer assisted steering with its built-in 10 Hz DGPS receiver and a large, high-resolution touch-screen display. With Cruiser, you manage your SmartSteer settings and controls with the same convenient touch-screen display—a significant advantage over other systems that require separate control panels for guidance and steering. Simple, affordable guidance, that's Cruiser. Now available with wireless technology.



Raven's Envizio Pro and Viper Pro multi-function field computers are also excellent pairing options for SmartSteer, giving you more opportunities for improved efficiency and performance. With Envizio Pro and Viper Pro field computers, you can easily add boom height and section controls, application controls and planter controls to your new precision-based system.

Your Raven dealer and Precision Ag Specialist can help you decide which Raven field computer and guidance system are best for your operating needs.

SmarTrax™: The next step up.



When you're looking for enhanced high-speed operation and faster line acquisition than even SmartSteer can provide, SmarTrax assisted steering is the next step up. The SmarTrax hydraulically controlled system also offers a greater range in correction for "harder" turns when needed—and can respond more quickly to changes in soil condition and implement pull for greater accuracy.

FIELD COMPUTERS

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PLANTER CONTROLS

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